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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,117	10/02/2003	Jean-Didier Gayrard	Q77684	6032

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EXAMINER

MCKINNON, TERRELL L

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,117

Applicant(s)

GAYRARD ET AL.

Examiner

Terrell L. Mckinnon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8, 9 11-22 and 24 is/are rejected.
- 7) ☒ Claim(s) 3-7, 10 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

Receipt is acknowledged of applicant's amendment filed April 11, 2005. Claims 1-24 are pending and an action on the merits is as follows.

Applicant's arguments with respect to claims 1, 2, 8-20 and 21-22 and 24 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 8, 11-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eninger et al. (U.S. 5,036,905) in view of Leidinger (U.S. 5,101,884).

Eninger discloses a heat exchanger for satellites comprising:

- a satellite having a support structure that includes a heat transfer system electronic module's at least one heat transfer means for transferring heat dissipated by the electronic module;
- connector means for connecting the transfer means to the heat transfer system of the structure in such a manner as to enable the supply of heat exchange fluid to the transfer means and the transfer of heat dissipated by the electronic module to the radiator;

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- a plurality of transfer means and a plurality of connector means adapted to be connected to a corresponding plurality of heat transfer systems with their own specific power dissipation capacity and temperature range regulation capacity;
- an evaporator assembly comprising at least one tube for supplying the assembly with heat-exchange fluid in the liquid state, and a vapor manifold, and connector means for the tube and the manifold adapted to connect them respectively to a supply pipe of heat-exchange fluid from a tank and to a vapor transport line for conveying vapor to the condenser of the heat system;
- the structure is provided with mechanical, thermal and electrical connection means adapted to connect a plurality of radiators.
- each radiator is associated with a group of equipments corresponding to a specific temperature and therefore necessitating appropriate cooling;
- wherein the module fluid conduit is provided at a position proximate the electronic module;
- the module fluid conduit has a common surface with the electronic module.
- the main fluid conduit has a locking device that shuts off the fluid connection between the module fluid conduit and the main fluid conduit.

Eninger's invention shows a valve symbol (x), but the specification is silent to its description and teachings.

3. However, Leidinger teaches the use of connectors (19 and 20) for connecting the heat transfer system.

Given the teachings of Leidinger, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the cooling system of Eninger with connectors (19 and 20) for connecting the heat transfer system.

Doing so would provide a safe and reliable means of connecting the fluid modules to the heat transferring system.

4. Claims 9 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eninger et al. (U.S. 5,036,905) in view of Leidinger (U.S. 5,101,884) as applied to claims above, and further in view of Chalmers (U.S. 4,738,304).

Eninger's invention, as modified by Leidinger, discloses all of the claimed limitations from above except for the module includes connecting means for connecting it to signal transport means situated in the structure and adapted to convey; an electrical power supply providing various voltages for the equipment, and/or service module signals such as those for acquiring telemetry from the equipments, for controlling the equipments, time references, and frequency references, and/or payload signals such as microwave, optical and digital signals; a cross-connect unit for payload signals, a service module subsystem, a power supply subsystem, the latter being respectively connected to the signal transport means; and the cross-connect unit includes means for statically or dynamically programming the module.

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5. However, Chalmers teaches the use of a control unit (1200) for regulating the signals on a spacecraft device, wherein it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the cooling system for spacecrafts of Eninger with modules includes connecting means for connecting it to signal transport means situated in the structure and adapted to convey; an electrical power supply providing various voltages for the equipment, and/or service module signals such as those for acquiring telemetry from the equipments, for controlling the equipments, time references, and frequency references, and/or payload signals such as microwave, optical and digital signals; a cross-connect unit for payload signals, a service module subsystem, a power supply subsystem, the latter being respectively connected to the signal transport means; and the cross-connect unit includes means for statically or dynamically programming the module.

Doing so would provide a means of controlling the various components on board the spacecraft for efficient cooling.

Allowable Subject Matter

6. Claims 3-7, 10 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

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Applicant's arguments filed April 11, 2005 have been fully considered but they are moot in view of the above-mentioned Rejection.

Applicant's states, the combination of Chalmers and Cima fails to disclose or suggest the applicant's claimed invention.

Eninger in view of Leidinger discloses a satellite support structure that includes a heat transfer system.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell L. Mckinnon whose telephone number is 571-272-4797. The examiner can normally be reached on Monday -Thursday and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on 571-272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terrell L McKinnon
Primary Examiner
Art Unit 3743
June 27, 2005